



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,773	10/02/2003	Michael J. Wolfe		9123

49716 7590 04/11/2005
EDWARD P. DUTKIEWICZ, ESQ.
EDWARD P. DUTKEIWICZ, P.A.
640 DOUGLAS AVENUE
DUNEDIN, FL 34698-7001

EXAMINER

SPAHN, GAY

ART UNIT	PAPER NUMBER
----------	--------------

3673

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,773

Applicant(s)

WOLFE, MICHAEL J.

Examiner

Gay Ann Spahn

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 12-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) 1 and 2 is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions - Restriction Requirement

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, drawn to a manufactured building system, classified in class 52, subclass 79.5.
- II. Claims 12-17, drawn to a building system for coupling vertical edges of panels, classified in class 52, subclass 582.1.
- III. Claims 18-24, drawn to a concrete floor system, classified in class 52, subclass 143.
- IV. Claims 25-26, drawn to a concrete floor manufacture station, classified in class 425, subclass 111.
- V. Claims 27-28, drawn to a method for manufacturing a concrete floor, classified in class 264, subclass 228.

Inventions I and II are related as combination and subcombination, respectively. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the manufactured building system as claimed does not require that its wall panels be made

Art Unit: 3673

of elastomeric foam. The subcombination as claimed has separate utility such as for use as a barrier within or around any given building structure.

Inventions I and III are related as combination and subcombination, respectively. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claimed manufactured building system does not require "a wheel assembly having a plurality of rigid metallic suspension shackle mounting plates." The subcombination has separate utility such as for use as a barrier or substrate within any given building structure.

Inventions IV and I are related as apparatus and product made, respectively. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case, the claimed manufactured building system can be made by another and materially different apparatus such as one which does not use "stressing head trolleys" and "trolley rails."

Inventions V and I are related as process of making and product made, respectively. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different

Art Unit: 3673

product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the claimed manufactured building system can be made by another and materially different process such as one without either the step of "providing a pair of trolley rails" or the step of "providing . . . stressing heads having a plurality of rail wheels."

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the claimed transportable concrete floor system is separately usable as a barrier or substrate within any given building structure not having connected wall units. See MPEP § 806.05(d).

Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions of the claimed building system for coupling vertical edges of panels and the claimed concrete floor manufacture station are not disclosed as capable of use together since the claimed concrete floor manufacture station does not make or connect the wall panels.

Inventions II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions of the claimed building system for coupling vertical edges of panels and the claimed method for manufacturing a concrete floor are

Art Unit: 3673

not disclosed as capable of use together because the claimed method for manufacturing the concrete floor does not make or connect the wall panels.

Inventions IV and III are related as apparatus and product made, respectively. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case, the claimed concrete floor system can be made by another and materially different apparatus such as one which does not use “stressing head trolleys” and “trolley rails.”

Inventions V and III are related as process of making and product made, respectively. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the claimed concrete floor system can be made by another and materially different process such as one without the either the step of “providing a pair of trolley rails” or the step of “providing . . . stressing heads having a plurality of rail wheels.”

Inventions V and IV are related as process and apparatus for its practice, respectively. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different

Art Unit: 3673

process. (MPEP § 806.05(e)). In this case, the claimed method for manufacturing a concrete floor can be practiced by another materially different apparatus such as one which does not require “stressing head trolleys.. . . [with] each having a front face with a recess being a contact surface . . . and two parallel side surfaces.”

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Election/Restrictions - Election of Species Requirement

This application contains claims directed to the following patentably distinct species of the claimed invention: Figure 13; Figure 16; and Figure 17.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims appear to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Attorney Edward P. Dutkiewicz on March 22, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11 and the species of Figure 13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

The drawings are objected to because: (1) Figure 13 has a circle with an arrow on the bottom right-hand side thereof that it is believed should be labeled with numeral "15" to show that a detailed view thereof is shown in Figure 15; (2) Figures 25 and 26 each have reference numeral "340" which is not discussed in the specification (it is believed that reference numeral "340" may be intended to represent the long axis of the multi-stemmed floor form table 330 in which case reference numeral --340-- could be

Art Unit: 3673

inserted into the specification on page 50, line 3, after the word "axis"). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "304" and "324" have both been used to designate "a plurality of rigid metallic suspension shackle mounting plates" (see Figure 22 and the specification on page 48, lines 9-10 and page 49, lines 5-6). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

Art Unit: 3673

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities:

(1) page 2, lines 6-8, the sentence "The present application is a Continuation-in-Part of co-pending application Serial No. 09/788,793 filed on 02-20-2001." should be amended to note that the application was abandoned on December 16, 2003;

(2) page 29, line 1, the first occurrence of the word "of" should be changed to -- taken along--;

(3) page 29, line 3, circle 15 is discussed, but no circle 15 is labeled in Figure 13;

(4) page 29, line 12, line 19-19 is discussed, but no line 19-19 is shown in Figure 18;

Art Unit: 3673

(5) page 29, line 14, line 20-20 is discussed, but no line 20-20 is shown in Figure 18;

(6) page 29, line 16, line 21-21 is discussed, but no line 21-21 is shown in Figure 18;

(7) page 29, line 23, line 23-23 is discussed, but no line 23-23 is shown in Figure 22A;

(8) page 30, line 7, line 26-26 is discussed, but no line 26-26 is shown in Figure 25;

(9) page 30, line 18, line 29-29 is discussed, but no line 29-29 is shown in Figure 28;

(10) page 18, line 25, page 19, line 12, page 20, lines 3 and 15, page 33, lines 3 and 16, and page 35, line 5, the word "fix-ably" should be changed to --fixably-- as it is on page 34, lines 8 and 21;

(11) page 45, line 20, reference numeral "204" is discussed, but not shown in the figures;

(12) page 45, line 21, reference numerals "206" and "208" are discussed, but not shown in the figures;

(13) page 45, line 22, reference numeral "210" is discussed, but not shown in the figures;

(14) page 45, line 25, reference numeral "216" is discussed, but not shown in the figures;

Art Unit: 3673

(15) page 46, line 5, reference numeral "224" is discussed, but not shown in the figures;

(16) page 46, line 10, reference numeral "228" is discussed, but not shown in the figures;

(17) page 46, line 14, reference numeral "230" should be changed to reference numeral --220--;

(18) page 46, line 152, reference numeral "234" is discussed, but not shown in the figures;

(19) page 46, line 16, reference numeral "236" is discussed, but not shown in the figures;

(20) page 46, line 26, reference numeral "258" is discussed, but not shown in the figures;

(21) page 47, line 1, reference numeral "260" is discussed, but not shown in the figures;

(22) page 47, line 2, reference numeral "262" is discussed, but not shown in the figures;

(23) page 48, lines 9-10, reference numeral "304" and on page 49, lines 5-6, reference numeral "324" have both been used to designate "a plurality of rigid metallic suspension shackle mounting plates";

(24) page 48, line 14, "align able" should be changed to --alignable--;

Art Unit: 3673

(25) page 49, line 9, the reference numeral --306-- should be inserted after the term "bolt hole" which it represents and reference numeral "306" should be deleted from the beginning of line 10;

(26) page 51, line 24, "couple able" should be changed to --coupleable--;

(27) page 52, lines 3-4, the term "flat face surface" is not understood because "face" and "surface" are the same thing;

(28) page 53, line 7, the term "self=stressing" should be changed to --self-stressing--; and

(29) page 55, line 12, "enable" should be --enables--.

Appropriate correction is required.

The use of the trademark Styrofoam has been noted in this application (page 10, lines 8 and 14). It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Furthermore, it is not known whether the terms "Quint-T" (beginning on page 43, line 17), "Gurney" (page 25, lines 5 and 23, and page 44, line 5), and "Self Mating Edge Adapter" (beginning at page 38, line 16) are trademarks? If so, the terms should be capitalized wherever they appear and be accompanied by the generic terminology.

Claim Objections

Claims 1 and 2 are objected to because of the following informalities:

(1) Claim 1 has two periods (at the end of line 78 and at the end of line 88) which is improper according to the Manual of Patent Examining Procedure (MPEP) § 608.01(m) entitled Form of Claims which specifies, as follows:

Each claim begins with a capital letter and ends with a period. Periods may not be used elsewhere in the claims except for abbreviations. See *Fressola v. Manbeck*, 36 USPQ2d 1211 (D.D.C. 1995).

(2) line 29, "fix ably" should be --fixably--;

(3) lines 56, 66, and 75, "fix-ably" should be --fixably--;

(4) line 58, "position" should be --positioned--;

(5) line 79, "Self Mating Edge Adapter" should not be capitalized unless it is a trademark;

(6) line 82, the term "SMEA" should only be used if line 79 is amended to recite --a self mating edge adapter or SMEA--; and

(7) line 70, "and" should be deleted; and

(8) line 78, "." should be changed to --; and--.

Claim 2 is objected to because of the following informalities:

(1) lines 14 and 18-19, "fix-ably" should be --fixably--;

(2) line 33, "and" should be deleted; and

(3) line 34, --; and-- should be inserted after "connectors".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 20, "the peripheral edges" lacks antecedent basis since the first paragraph of the body of the claim was amended to delete the phrase "each slab adapted to contact each other on one long parallel side edge to form peripheral edges." Are "the peripheral edges" the "two parallel side edges and two parallel end edges" recited in lines 7 and 8? It is suggested that "the peripheral edges" be amended to -- said front and rear end edges and said side edges of said pair of multi-stemmed pre-stressed concrete floor systems--.

Claim 1, line 21, "the front and rear edges" lacks antecedent basis. It is suggested that the lack of antecedent basis problem could be fixed by amending lines 8-9 from "one end edge being the front end and one end edge being the rear end" to -- one of said two parallel end edges being a front end edge and another of said two parallel end edges being a rear end edge-- and amending line 21 from "the front and rear edges" to --the front and rear end edges and the side edges of the pair of multi-stemmed pre-stressed concrete floor systems--.

Claim 1, lines 29-30, "a multi-stemmed concrete floor system" is confusing since a pair of multi-stemmed pre-stressed concrete floor systems has already been

Art Unit: 3673

introduced in line 4. It is suggested that the lack of antecedent basis problem could be fixed by amending line 29-30 to read --one of said pair of multi-stemmed pre-stressed concrete floor systems--.

Claim 2, line 26, "an adjustable roof ridge connector and eave connectors" is recited, but then "a pair of adjustable eave connectors" are recited in line 29. Are the "pair of adjustable eave connectors" recited in line 29 the same "eave connectors" recited in line 26 or different ones?

Claim 2, line 3, and claim 10, line 2, use the term "self-trailing" and it is not understood as to what is being defined by the term "self-trailing." In particular, the specification does not appear to clearly set forth what the term "self-trailing" entails. Page 43, line 6, of the specification does mention "self-trailing," but fails to adequately define the structure which would serve to allow the so-called "trailer-less transportation."

Response to Amendment

In parent application (i.e., U.S. Patent Application Serial No. 09/788,793), Applicant filed an Amendment After Final Rejection on May 6, 2003 which enclosed an Assignment assigning the interest in the Davie patent (i.e., U.S. Patent No. 6,101,779) to Advanced Building Components, Inc. and a Supplemental Amendment After Final Rejection on June 2, 2003 which enclosed an Assignment assigning the interest of U.S. Patent Application Serial No. 09/788,793 and all of its continuing applications to Advanced Building Components, Inc. Then, Applicant argued that the Davie patent should no longer be considered as prior art against U.S. Patent Application Serial No.

Art Unit: 3673

09/788,793 (and presumably any of its continuing applications) because of the common ownership of the Davie patent and U.S. Patent Application Serial No. 09/788,793.

It appears that Applicant may be arguing that the Davie patent should no longer be considered as prior art because of 35 U.S.C. § 103(c) which states in pertinent part, as follows:

35 USC 103 Conditions for patentability; non-obvious subject matter.

...

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of **section 102** of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, **at the time the invention was made**, owned by the same person or subject to an obligation of assignment to the same person. (Emphasis added).

The Davie patent clearly qualifies as prior art against U.S. Patent Application Serial No. 09/788,793 under 35 U.S.C. § 102(e) because it was filed on March 2, 2000 before the February 20, 2001 filing date of the U.S. Patent Application Serial No. 09/788,793 and it was patented on October 9, 2001 after the February 20, 2001 filing date of the U.S. Patent Application Serial No. 09/788,793. However, the Davie patent has not been removed as prior art against U.S. Patent Application Serial No. 09/788,793 under 35 U.S.C. § 103(c) because the Davie patent and U.S. Patent Application Serial No. 09/788,793 **were not commonly owned at the time the invention was made** (i.e., the February 20, 2001 filing date of the U.S. Patent Application Serial No. 09/788,793).

Art Unit: 3673

Indeed, the Davie patent was not assigned to Advanced Building Components, Inc. until March 21, 2003. The present inventor, Michael J. Wolfe, did not assign his interest in the present application to Advanced Building Components, Inc. until May 20, 2003. Thus, common ownership of the Davie patent and the present patent application was not established until May 20, 2003. Common ownership was not established at the time the invention was made (i.e., the February 20, 2001 filing date of the U.S. Patent Application Serial No. 09/788,793). Please note that even though the present application is a Continuation-In-Part application, all of the subject matter of claims 1-11 which are still pending in the present application can be found in the parent application. Therefore, "the time invention was made" is the filing date of the parent application (i.e., February 20, 2001) and the present common ownership of the Davie Patent and the present application does not remove Davie as a reference against the present application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davie in view of Davenport, Eubank, and Davie's Figure 5.

With respect to independent claim 1, Davie discloses a manufactured building system (10) for constructing prefabricated homes that can be easily transported and assembled comprising, in combination:

a concrete floor system (12) having a generally rectangular configuration with an up side and a down side and a thickness there between, the concrete floor system (12) having two parallel side edges and two parallel end edges, one end edge being the front end and one end edge being the rear end, with the system (12) having a downwardly disposed short front reinforced diaphragm header (see 18, Fig. 1) and a parallel downwardly disposed rear reinforced diaphragm header (see 18, Fig. 1);

a plurality of vertically disposed wall panels (16) associated with the peripheral edges, the wall panels (16) extending upwardly from both the front and rear edges and the side edges, the wall panels (16) also having window openings (22, see col. 4, line 66) and door openings (22, see col. 4, line 66);

a plurality of base connectors (14, Figs. 2-2A) positioned at the lower edges of the wall panels (16), each base connector (14) having a first end with generally U-shaped flat faces receiving the wall panels (16) adjacent to their lower edges, each base connector (14) also having a second end with components fixably positioned with respect to the concrete floor system (12);

four corner connectors (110, Fig. 5) coupled to adjacent vertical edges of the wall panels (16) above the corners of the floor system (12), each corner connector (110) constructed of a fixed first component (120) having U-shaped flat faces (119) secured to the adjacent vertical edges of the wall panels (16), each first component

(120) having a central cylindrical recess (126) and an exterior arcuate first plate (132), each corner connector (110) also having an intermediate second component (136) in a generally H-shaped configuration with interior cylinders (140) rotatably received within the cylindrical recesses (126) and with arcuate second plates (134) in sliding contact with the first plates (132) and with bolts (144) fixably coupling the arcuate plates (132, 134) at a predetermined angular orientation;

a pair of roof diaphragms (18, Fig. 1) each with a periphery there around and intermediately angled with respect to each other to form a linear ridge (20) at the top when the two roof diaphragms are laterally aligned;

an adjustable roof ridge connector (146, Fig. 4) constructed of fixed first components (148) having U-shaped flat faces secured to the adjacent edges of the roof diaphragms (18), each first component (148) having exterior arcuate first plates (left 162, 164) which are in sliding contact with arcuate second plates (right 162, 164) and with bolts (170, 172) fixably coupling the arcuate plates (162, 164) at a predetermined angular orientation;

a pair of adjustable eave connectors (71, Fig. 3) position between the upper edges of the wall panels (16) and the roof diaphragms (18, Fig. 1), each eave connector (71) having a first component (94) having a flat face coupled to a roof panel (18) with a central cylindrical component (82) and an exterior first arcuate plate (90) and with a second component (77) having a U-shaped flat face secured to the adjacent upper edge of the wall panels (16) with a central cylindrical recess and a second exterior arcuate plate (92) in sliding contact with the first plate (90), each

Art Unit: 3673

adjustable eave connector (71) having a bolt (108) fixably coupling the arcuate plates (90, 92) at a predetermined angular orientation;

a pair of gable end walls (see Fig. 1) with a periphery there around and intermediately angled with respect to each other to form a linear ridge (20) at the top when the two gable end walls are aligned;

a plurality of gable end connectors (176), each gable end connector (176) being in a C-shaped configuration (178, 180, 182) with oppositely extending apertured flanges (188, 190) running parallel with the C-shaped channels (178, 180, 182), bolts (192, 194) passing through the roof diaphragms (18) and flanges (188, 190) to fixably connect the roof diaphragms (18) to the gable end connectors (176), another bolt (185) extending through the C-shaped channel (178, 180, 182) and the vertical gable end wall (16, 56) for fixable coupling there between; and

a self mating edge adapter or SMEA (62, Fig. 7) that is assembled in two L-shaped halves that connect to the vertical edge of building panels (16, 56) according to the design of the panels (16, 56) to which it is fitted, each half of the SMEA (62) is fitted around the longitudinal edge of two opposing panels (16, 56) and is permanently attached to the panel (16, 56) with mechanical or chemical fasteners (67), the edges being permanently joined with an integral snap fit design (69), the two L-shaped halves forming an integral rectangular or square extrusion permanently positioned between and joining the two opposing composite building panels (16, 56).

Davie fails to disclose a pair of concrete floor systems, which are pre-stressed, which are joined to each other, and which each have downwardly disposed stems that are arranged in a direction perpendicular to the diaphragm headers and Davie also fails to teach some of the particulars of the adjustable roof ridge connectors such as the interior cylinders rotatably received in the cylindrical recesses and the generally H-shaped configuration of the intermediate second component.

Davenport discloses a pair of prefabricated concrete floor slabs (10a, 10b) which are joined side-by-side (see Fig. 11) and which each have a plurality of downwardly disposed stems (30, 30a, 30b, 32) which are oriented in a direction parallel to the roof diaphragms and a plurality of downwardly disposed stems (20a, 20b) which are oriented in a direction perpendicular to the roof diaphragms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Davie by providing two concrete slabs joined together side-by-side at the building site as taught by Davenport in order to more easily transport the smaller slabs to the building site for connection there.

Eubank discloses a pre-stressed multi-stemmed (23, 25) concrete floor slab (21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have pre-stressed the floor slabs of Davenport before side-by-side joining of the separate floor slabs in the manufactured building system of Davie in order to increase the strength of the concrete flooring system and to prevent breaking or cracking of the concrete floor slabs when placed in tension.

The adjustable roof ridge connector (146, Fig. 4) of Davie is extremely similar to the corner connector (110, Fig. 5) of Davie except that it does not have the generally H-shaped intermediate second component with interior cylinders rotatably received in cylindrical recesses. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the adjustable roof ridge connector (146, Fig. 4) of Davie to have an generally H-shaped intermediate second component with interior cylinders rotatably received in cylindrical recesses as taught by the corner connector (110, Fig. 5) of Davie in order to create a sturdier and more secure connection between roof panels (as by providing a solid cylindrical pivot point along the ends of adjacent roof panels).

Claim Rejections - 35 USC § 103

Claims 2-6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davie in view of Davenport.

With respect to claim 2, Davie discloses a manufactured building system (10) comprising, in combination:

a concrete floor system (12, Figs. 2-2A) having a generally rectangular configuration with a downwardly disposed short front diaphragm header (18, Fig. 1) and a parallel downwardly disposed rear diaphragm header (18, Fig. 1);

a plurality of vertically disposed wall panels (16, Fig. 8) associated with the peripheral edges;

Art Unit: 3673

a plurality of base connectors (14, Figs. 2-2A) positioned at the lower edges of the wall panels (16) and fixably positioned with respect to the floor system (12) for coupling the wall panels (16) to the floor system (12);

four corner connectors (176, Fig. 6) coupled to adjacent vertical edges of the wall panels (16) above the corners of the floor system (12) being fixably coupled at a predetermined angular orientation to form continuous walls;

a pair of roof diaphragms (18, Fig. 1) each with a periphery there around and intermediately angled with respect to each other to form a linear ridge (20) at the top;

an adjustable roof ridge connector (146, Fig. 4) and eave connectors (71, Fig. 3) and with securement members maintaining the roof diaphragms (18, Fig. 1) at a predetermined angular orientation;

a pair of adjustable eave connectors (71, Fig. 3) positioned between the upper edges of the wall panels (16) and the roof diaphragms (18, Fig. 1) at a predetermined angular orientation;

a pair of gable end walls (Fig. 1) forming a linear ridge (20) at the top when the two gable end walls are aligned;

a plurality of gable end connectors (176, Fig. 6); and

a self-mating edge adapter (62) positioned between the two halves of a gable end wall (16) and locking the two halves together.

Art Unit: 3673

Davie fails to disclose a pair of concrete floor systems, which are self-trailing, which are joined to each other, and which each have downwardly disposed stems that are arranged in a direction perpendicular to the diaphragm headers.

Davenport discloses a pair of self-trailing (see Fig. 14) prefabricated concrete floor slabs (10a, 10b) which are joined side-by-side (see Fig. 11) and which each have a plurality of downwardly disposed stems (30, 30a, 30b, 32) which are oriented in a direction parallel to the roof diaphragms and a plurality of downwardly disposed stems (20a, 20b) which are oriented in a direction perpendicular to the roof diaphragms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Davie by providing two concrete slabs joined together side-by-side at the building site as taught by Davenport in order to more easily transport the smaller slabs to the building site for connection there.

As to claim 3, Davie discloses that fireproof steel sheets sandwich insulation (col. 5, lines 5-10) and therefore, the components of the system are fabricated of fireproof materials.

As to claim 4, Davie discloses the use of concrete (col. 2, line 35), steel (col. 2, line 28-29), and aluminum extrusions (col. 2, lines 30-31) which are termite and insect proof materials.

As to claim 5, Davie discloses the use of polystyrene foam insulation (col. 2, lines 29-30) which is a composite material.

As to claim 6, Davie discloses the use of panels of polystyrene foam insulation (col. 2, lines 29-30) which is sandwiched between interlocking steel faced panels which inherently would satisfy a system insulation rating of at least R24. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for materials which would satisfy a system insulation rating of at least R24 since it is well founded that varying the degree of material properties is not a patentable distinction over the prior art minus a showing of criticality.

As to claim 9, both Davie (col. 2, lines 27-28) and Davenport (see Fig. 14) disclose that their systems are transportable.

As to claim 10, Davie discloses that the system is self-trailing (see Fig. 14) at least to the extent that that term is understood (see rejection under 35 U.S.C. § 112, second paragraph above).

As to claim 11, Davie discloses the use of aluminum extrusions (col. 2, lines 30-31) and aluminum is a recyclable material.

Claim Rejections - 35 USC § 103

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davie in view of Davenport as applied to claim 2 above, and further in view of Eubank.

Eubank discloses the pre-stressing of concrete floor systems. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have pre-stressed the floor slabs of Davenport before side-by-side joining of the separate floor slabs in the manufactured building system of Davie in order to increase the strength of the concrete flooring system and to prevent breaking or cracking of the concrete floor slabs when placed in tension.

Claim Rejections - 35 USC § 103

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davie in view of Davenport as applied to claim 2 above, and further in view of Gregory.

Gregory discloses that the use of cathedral ceilings (80, Fig. 5, col. 8, line 49-51) in modular building systems is old and well known in the art. It would have been obvious to one of ordinary skill in the art to include cathedral ceilings as taught by Gregory in the modified manufactured building system of Davie in view of Davenport in order enhance the aesthetic appearance of the interior of the building.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 6,223,481 to Rickman discloses an adjustable

Art Unit: 3673

roof connector in Fig. 2. U.S. Patent No. 6,119,410 to Wolfe discloses an adjustable corner connector in Fig. 7. U.S. Patent No. 6,085,469 to Wolfe discloses structural connector systems. U.S. Patent No. 6,000,176 to Lancaster discloses roof ridge assemblies in Figs. 1, 3, 6, and 7. U.S. Patent No. 5,901,514 to Wolfe discloses an extruded building frame and baseboard combination member (192) in Fig. 4. U.S. Patent No. 5,890,341 to Bridges et al. discloses a method of constructing a modular structure. U.S. Patent No. 5,826,380 to Wolfe discloses an adjustable roof ridge connector in Fig. 4. U.S. Patent No. 5,509,242 to Rechsteiner et al. discloses a structural insulated building panel system. U.S. Patent No. 5,373,678 to Hesser discloses a structural panel system. U.S. Patent No. 5,279,436 to Elliot et al. discloses a corner connector in Fig. 4. U.S. Patent No. 5,274,972 to Hansen discloses a connector having cylinder receiving recesses (28, 34) in Fig. 4. U.S. Patent No. 5,146,723 to Greenwood et al. discloses a drywall construction and connectors. U.S. Patent No. 4,934,115 to Nuzaki discloses a hinged wall construction in Fig. 1. U.S. Patent No. 4,872,297 to Hetzel et al. discloses an adjustable eave connector in Fig. 1 and cylinder receiving recess in Fig. 2. U.S. Patent No. 4,761,927 to O'Keeffe et al. discloses a panelized enclosure system (20) in Fig. 1. U.S. Patent No. 4,663,896 to Dunnick discloses window frame members in Fig. 1. U.S. Patent No. 4,606,162 to Wendt discloses an adjustable glazed partition system in Fig. 1. U.S. Patent No. 4,100,704 to Oogami discloses an adjustable transom assembly in Figs. 1-3. U.S. Patent No. 4,080,766 to Jastrabek discloses a demountable partition structure. U.S. Patent No. 3,893,269 to Nelsson et al. discloses connections in Figs. 3, 5, 6, and 7.

U.S. Patent No. 3,210,808 to Creager discloses an flexible mullion having cylinder receiving recesses. U.S. Patent No. 3,139,958 to De Witt discloses a portable foldable building structure having cylinder receiving recesses in Fig. 15. U.S. Patent No. 2,461,916 to Omar discloses a demountable building and structural unit therefor. U.S. Patent No. 2,051,707 to Harrison discloses a building construction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose current telephone number is (703)-605-1203 and whose future telephone number will be (571)-272-7731 after March 31, 2005. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can currently be reached at (703)-308-2978 and after March 31, 2005, can be reached at (571)-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3673

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

^{GAS}
Gay Ann Spahn, Patent Examiner
March 25, 2005



HEATHER SHACKELFORD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600